Freddie Mac MULTIFAMILY

Spotlight on

Underserved Markets

DUTY TO SERVE

A Study of Mixed-Income Housing in Areas of Concentrated Poverty

A Study of Mixed-Income Housing in Areas of Concentrated Poverty
Examining the Existing Stock and Construction Pipeline to Evaluate the Breadth of the Market

Deliberate efforts to construct mixed-income properties for the purpose of deconcentrating poverty is still a relatively new concept. This unique market segment, which falls under the umbrella of Residential Economic Diversity in the Duty to Serve regulation, aims to provide units that are affordable units to existing households in a high poverty area, and market-rate units for higher-income households, all within the same property. The goal of this integration is to create a more vibrant, diverse community with the economic resources to provide income mobility for all residents.

Housing and economic growth are closely linked, and nowhere is this relationship more evident than with mixed-income housing in Areas of Concentrated Poverty (ACPs). However, the knowledge base of the mixed-income market is limited. Many resources on the history and theoretical concepts regarding mixed-income are available, including recent research by Freddie Mac, but most studies do not examine current trends, or more importantly, what the future holds for this market in the near term.

Markets generally operate more efficiently with transparency. To that end, we present new data analysis in this paper which examines rental and occupancy trends in this market, as well as analyzes construction pipeline data to measure current mixed-income development activity across the country, with a particular focus on ACPs. The purpose of our research is to provide researchers, policymakers, developers and other stakeholders with insightful analysis on this crucial housing market and show which factors are most commonly associated with mixed-income development in ACPs.

Below are some of the key findings of our research:

- We have identified 4,490 mixed-income properties across the country as of October 2020 using data from Yardi® Matrix, 1,477 of which are located in ACPs.
- Mixed-income properties are slightly overrepresented in ACPs when compared with properties that are not mixed-income.
- Overall, about 32.9% of mixed-income properties are located within ACPs, while nearly 36.2% of mixed-income pipeline properties are in ACPs, indicating ACPs may be ripe for mixed-income investment.
- Mixed-income properties within ACPs are most prevalent within the metro areas in New York, Texas and California, which contain some of the priciest rental markets in the nation.
- We have identified 763 mixed-income properties currently in the development pipeline in ACPs that will create 188,588 new units (if the projects come to fruition). Development activity is high compared with the existing stock, with an outsized portion of development in Opportunity Zones.
- Development of mixed-income properties in ACPs is occurring in almost every state, but is most prevalent in California, which has the most mixed-income properties in the pipeline in ACPs, and Washington, D.C., which has the highest number relative to the existing multifamily stock.
- Within ACPs, mixed-incomed properties, both completed and in the pipeline, tend to be in areas where the renter-rate, income and income inequality are comparatively high.

This paper is the third and final in a series released on this topic over a three-year period. In the first paper, we published research on the history of mixed-income housing and the demographic and economic characteristics of ACPs. For the second paper, we conducted four case studies that examined four mixed-income properties. This paper focuses on contemporary trends that can serve as a comprehensive point-in-time resource for market data and analysis.

Market Recap and Data

Recap of ACPs and Mixed-Income

Mixed-income housing describes a type of housing in which units in the same property are rented at various price points for residents of various incomes. The lower cost units will often, but not always, be subsidized. The purpose of mixed-income housing is to promote economic integration with the goal of establishing more vibrant and economically robust communities, especially in areas where economic growth has been stunted.

For the purpose of Duty to Serve, mixed-income housing has a very specific definition, defined as properties in which:

1. At least 20% of the units are affordable to families with incomes at or below 50% of area median income (AMI);
   OR
   At least 40% of the units are affordable to families with incomes at or below 60% of AMI.

2. At least 20% of the units are unaffordable to families with incomes at 80% of AMI.

Since part of the purpose of mixed-income housing is broadening economic opportunity, this style of housing can be especially impactful if it's placed in an ACP. The Duty to Serve regulation describes an ACP as a census tract designated by the Department of Housing and Urban Development that is either a Qualified Census Tract (QCT) or a Racially/Ethnically Concentrated Area of Poverty (R/ECAP).

A QCT is a census tract that satisfies at least one of the following two conditions:

1. The income of at least half of the households is at or below 60% of the AMI;
2. The poverty rate is at least 25%.

A R/ECAP is a census tract that satisfies both of the following two conditions:[1]

1. The poverty rate is at least three times higher than the poverty rate in the CBSA[2] in which the tract is located;
   OR
   The poverty rate is greater than 40%;

2. The nonwhite population is 50% or greater[3].

There are 15,280 census tracts in the United States that are designated as ACPs, which represents 20.9% of all tracts nationwide. Exhibit 1 shows the location of all ACPs,[4] taken from Freddie Mac's Mission Map.

[1] In the Duty to Serve regulation, a R/ECAP is defined as a "geographic area with significant concentrations of poverty and minority populations." Duty to Serve chose to follow HUD's definition, which currently defines R/ECAPs in the way listed in this section.
[2] CBSA stands for core-based statistical area and comprises MSAs (metropolitan statistical areas) and μSAs (micropolitan statistical areas).
[3] In areas outside of CBSAs, the threshold used is 20%.
[4] Geographic areas are based on the 2018 definitions of ACPs. The 2018 definitions were used for all other DTS papers produced by Freddie Mac Multifamily to date. More information on the geographic delineations can be found at this link.

Exhibit 1: Map of Areas of Concentrated Poverty

Source: Freddie Mac Multifamily's [Mission Map]

Introduction to Yardi Matrix Data and the Purpose of the Paper

In this paper, we evaluate current conditions in the mixed-income market, with a special emphasis on development in ACPs. Our analysis will expand upon market knowledge from previous research using data from both completed (i.e., all existing) properties and units in the pipeline, showing how ACPs differ from other areas and giving researchers and policymakers a better sense of the characteristics of this growing market.

The data that we use comes from Yardi Matrix, a real estate market intelligence firm. The Yardi Matrix data includes historical performance, including rent and vacancy, across the country for multifamily properties of 50+ units. Also included is the current supply of the nation's partially affordable properties, as well as the pipeline of future supply.

The Yardi Matrix "partially affordable" definition does not align perfectly with the mixed-income definition, which is a limitation of our analysis. Yardi Matrix defines partially affordable as, "a property including a portion of households required to be offered as Affordable." Affordable units include units that are subsidized either by the property through reduced rental rates or by an outside agency (typically a government agency), or units that are not subsidized but that contain a percentage of households that meet certain income limits. Despite the inconsistencies between the definitions of mixed-income and partially affordable, we believe that the partially affordable designation is a good proxy for mixed-income since they are conceptually very similar.

All of these datasets together paint a detailed picture about the past, present and near future of the mixed-income market and general market conditions of ACPs in comparison with other areas. The concept of mixed-income is not new, but quantitative analysis on the subject is still in its infancy relative to the general multifamily market. Using Yardi Matrix's partially affordable designation as a proxy, we aim to provide researchers and policymakers with substantive knowledge of the nation's mixed-income housing markets, particularly in ACPs, since mixed-income housing can be especially beneficial to these communities.

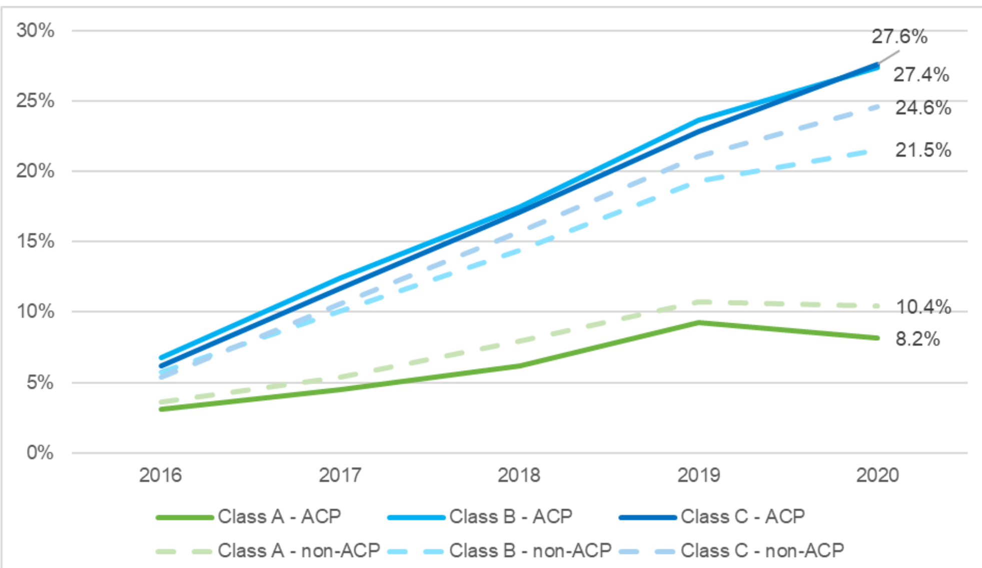
One important note about our analysis is that Puerto Rico is not included. Although Puerto Rico has a very high concentration of ACPs, we are unfortunately not able to study this market due to unavailability of multifamily data.

Multifamily Market Characteristics of ACPs

Rent levels in ACPs are generally lower than in other areas. In 2020 through September, the median rent of units located in ACPs is $1,074, compared with $1,263 outside of ACPs (-14.9% lower). This disparity is intuitive. Areas with lower income generally have less demand for higher-priced rental units. Consequently, Class B and C apartments[5] are more common in ACPs, and units in these properties command lower rents than their Class A counterparts, which are disproportionally located outside of ACPs. However, even after accounting for asset class, ACP rents are still lower. Among Class B and C units, rents in ACPs are -5.7% and -9.7% lower, respectively.

Since 2015, rent growth has been faster in ACPs than in other areas. During this period, rents in ACP units have grown by 28.1%, while rents outside of ACPs have grown by only 20.5%. This is generally true even after accounting for asset class. For Class B properties, ACP rents grew 27.4% compared with 21.5% for Class B outside of ACPs. Similarly, for Class C properties, ACP units' rent growth outpaced Class C outside of ACPs, 27.6% to 24.6%. However, Class A rent growth outside of ACPs exceeded Class A in ACPs, 10.4% to 8.2%.

Exhibit 2: Rent Growth Rates by Geography and Asset Class



Source: Freddie Mac Tabulations of Yardi Matrix data

In each of the past five years, occupancy rates inside and outside of ACPs have been virtually the same. Occupancy in both areas peaked in 2016 at 97.1% and has slowly been declining to the current level of 95.7%.

Controlling for asset class, we find that multifamily properties in ACPs generally have lower occupancy than in non-ACPs. However, this effect is offset by the tendency of ACPs to have more properties in higher occupancy asset classes. That is, ACPs have an overconcentration of properties in lower asset classes, and in recent years, units in these classes have had higher occupancy than luxury units. For example, Class A occupancy rates across all geographies were 95.9% and 94.3% in 2015 and 2020, respectively, while Class C occupancy rates were 97.0% and 96.7%, respectively. Ultimately, these two effects cancel out, resulting in nearly equivalent occupancy rates for the two geographies.

[5] 'Class' refers to improvement rating, with Class A indicating the highest quality and Class C indicating lower quality. This will be discussed further in a later section.

Current Mixed-Income Market

Snapshot of Completed Mixed-Income Market

According to our analysis of Yardi Matrix data, there are 1,477 mixed-income multifamily properties located in ACPs as of October 2020. Of these, 1,379 had information on how many units were affordable. Nationally, there are 252,310 units in mixed-income properties, of which 109,310 are affordable, equating to 43.3% of all units within the mixed-income developments.

The mixed-income properties in ACPs tend to be older than those not in ACPs. The average age of those in ACPs is 29 years, while the developments outside of ACPs average 24 years. Newer buildings make up a larger share of mixed-income projects outside of ACPs, where about 42% of developments have been completed since 2010, compared with 34% for projects in ACPs. Seniors housing makes up 7.3% of these mixed-income properties, with a slightly higher proportion located outside ACPs than within them.

From studying the composition of housing in ACPs and outside of ACPs (i.e., ACP/non-ACP in the denominator), we find that approximately 5.9% of properties in ACPs are mixed-income, compared with 5.7% of properties outside of ACPs. Similarly, 6.3% of units in ACPs are in mixed-income developments, compared with 6.1% outside of ACPs.

Another way to examine the geographic disparity is to instead look at the universe of mixed-income housing and see how many are in ACPs (i.e., mixed-income/non mixed-income in the denominator). Using this approach, we find that 32.9% of mixed-income properties are in ACPs, compared with 32.2% of non-mixed-income properties. Similarly, 30.1% of units that are in mixed-income properties are in ACPs, compared with only 29.2% outside of ACPs. In our 2018 research paper on the topic of mixed-income housing ACPs, we theorized that ACPs could be good candidates for mixed-income housing due to their high rental rate and high differentiation of income levels. This prediction appears to hold true.

Exhibit 3: Rate of Mixed-Income Housing in ACPs

	Percentage of Properties/Units that are Mixed-Income by Geography	
	ACP	**Non-ACPs**
Properties	5.9%	5.7%
Units	6.3%	6.1%
	Percentage of Properties/Units that are in ACPs by Type	
	Mixed-Income	**Not Mixed-Income**
Properties	32.9%	32.2%
Units	30.1%	29.2%

Source: Freddie Mac Tabulations of Yardi Matrix data

From these results, we find that mixed-income housing is more common in ACPs, but not by a significant margin. However, in the following section, we discover that this result is little bit deceiving since controlling for an area's location, mixed-income is more common in ACPs.

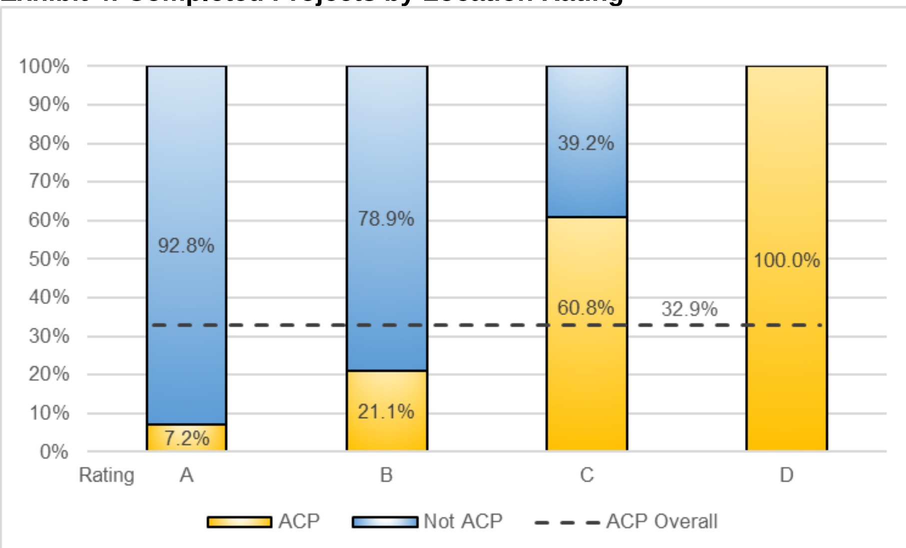
Location Rating

Yardi Matrix uses an A to D location rating to assess the area surrounding an apartment building. An A rating describes a very desirable area, with close proximity to high quality employment, relatively new housing and unique positive characteristics, such as an ocean or mountain view. Conversely, a D rating describes a less desirable area, often with higher crime rates and sparse and/or low paying local employment opportunities.

The vast majority of mixed-income projects in areas with a location rating of either A or B are not found in ACPs. Just 53 of the 736 properties (7.2%) in A-rated locations are in ACPs. Properties with a B location rating are primarily outside of ACPs, with only 459 projects out of 2,177 (21.1%) in ACPs. Overall, about 32.9% of projects are located within ACPs.

Among projects with a location rating of C or D, the rates within ACPs are much higher with just over 60% of properties in C-rated locations in ACPs. In fact, all 16 of the properties in D-rated locations are in ACPs. While this is an intuitive outcome that the lower rated locations would more likely be in ACPs, it is nonetheless informative to see just how many of the lower rated locations are actually in ACPs.

Exhibit 4: Completed Projects by Location Rating



Source: Freddie Mac Tabulations of Yardi Matrix data

To put these rates into perspective, we show the prevalence of mixed-income housing by location rating below in Exhibit 5. As the ACP composition increases, the rate of mixed-income housing drops. For example, A-rated locations have the highest rate of mixed-income housing at 8.8%, but only 7.2% of properties with a location rating of A are in ACPs (as also seen in the first yellow bar of Exhibit 4).

Exhibit 5: ACP Composition and Mixed-Income Prevalence by Location Rating

	ACP Mixed-Income Composition	Mixed-Income Properties (Nationally)	Non-Mixed-Income Properties (Nationally)	Rate of Mixed-Income
Class A	7.2%	740	7,634	8.8%
Class B	21.1%	2,196	37,117	5.6%
Class C	60.8%	1,567	29,013	5.1%
Class D	100%	21	265	5.7%
Total	32.9%	4,519	74,029	5.8%

Source: Freddie Mac Tabulations of Yardi Matrix data. Note: a very small number of properties do not have a location rating, and as such, the total of the classes will not sum to the grand total.

The last column in Exhibit 5 is the rate of mixed-income housing by location rating for the entire nation. However, in Exhibit 6 below, we find that the rate is higher for every location rating in ACPs. That is, controlling for location rating, we find that ACPs have a higher rate of mixed-income housing.
To illustrate this more clearly, we separated the data from the last column in Exhibit 5 into ACP and non-ACP, as seen in Exhibit 6. The higher rate observed for ACPs in every location rating indicates higher prevalence for each class. However, ACPs have an outsized share of housing in areas with low location ratings, and because lower location ratings generally have less mixed-income housing, the overall rate of mixed-income in ACPs is about on par with non-ACPs. In this way, the two effects largely cancel out, which is a finding similar to the occupancy rate analysis earlier in this paper.

Exhibit 6: Rate of Mixed-Income Housing by Geography

	Rate of Mixed-Income Housing		
	ACPs	Non-ACPs	Total
Class A	12.9%	8.6%	8.8%
Class B	6.0%	5.5%	5.6%
Class C	5.6%	4.5%	5.1%
Class D	6.1%	0.0%	5.7%
Total	5.9%	5.7%	5.8%

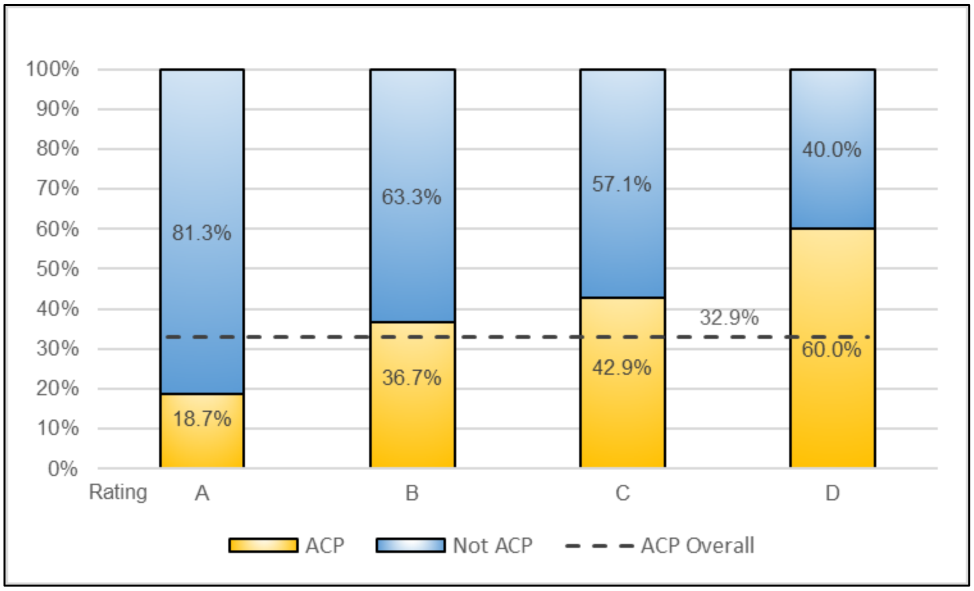
Source: Freddie Mac Tabulations of Yardi Matrix data

Improvement Ratings

Yardi Matrix uses an A to D improvement rating to assess physical quality of multifamily buildings. An A rating describes a property with great amenities, attractive architectural style and superior construction quality. Conversely, a D rating describes a property that's main attractive feature is low rents, with very limited amenities and small unit sizes. The improvement rating is a great measure of overall building quality and helps to highlight differences between properties in ACPs and out of ACPs.

Compared with location rating, the improvement rating for mixed-income projects is more evenly distributed across geographies, but still a vast majority of the higher quality projects are not located within ACPs. For the roughly 1,300 projects rated A, 18.7% are located within ACPs, while 36.7% of the 1,700 B-rated projects are located within ACPs, which is slightly above the overall rate of 32.9%. There are 42.9% of projects with an improvement rating of C located within ACPs, while three of the five D-rated projects are in ACPs. While this is again an intuitive result, most newly built apartments start off with a high improvement rating, then as they age, the improvement rating slowly drops. In other words, as projects age and neighborhoods change over the years, more variance of improvement ratings should be expected in ACPs.

Exhibit 7: Completed Projects by Improvement Rating

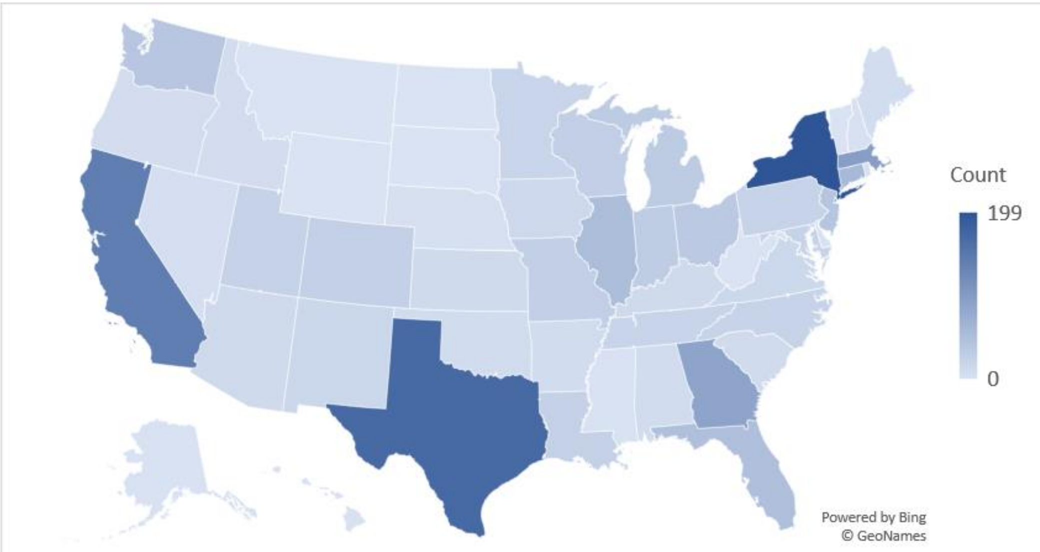


Source: Freddie Mac Tabulations of Yardi Matrix data

Geographic Analysis

New York has the most completed mixed-income properties in ACPs with 199 developments and 31,289 units, at least 10,387 of which are affordable. Texas has fewer completed properties, with 170, but has more total units and more affordable units than New York, with 33,758 and 16,215, respectively. California, Massachusetts and Georgia round out the top five.

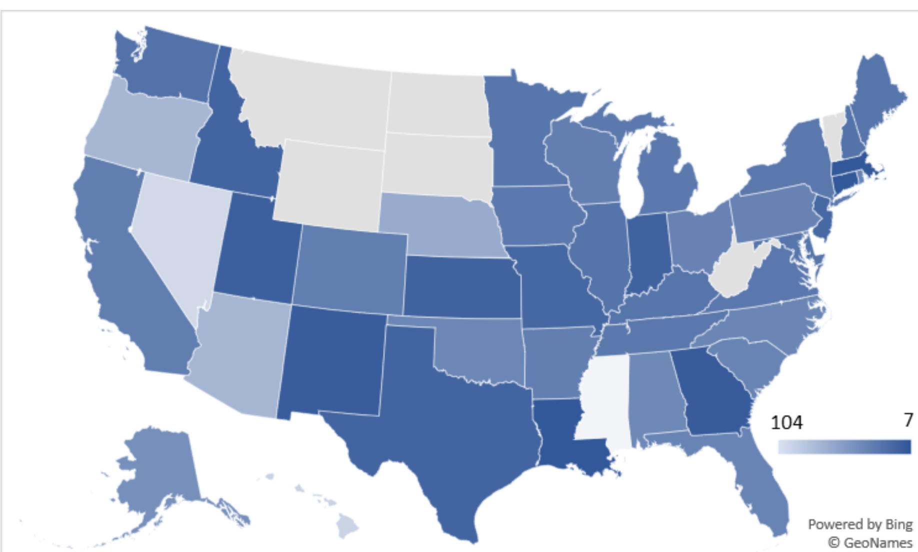
Exhibit 8: Completed Mixed-Income Projects in ACPs



Source: Freddie Mac Tabulations of Yardi Matrix data

When factoring in the number of multifamily households, we find that these five states still rank high in terms of existing stock of units in mixed-income properties, with the exception of California, which actually has comparatively few mixed-income units. The District of Columbia has the highest concentration of units in mixed-income properties, with one in every seven multifamily households, while Connecticut, Massachusetts, Louisiana and Georgia round out the top five. On the other end of the spectrum, Delaware has the highest number of households per mixed-income unit at 104.

Exhibit 9: Completed Mixed-Income Units in ACPs Per Multifamily Household



Source: Freddie Mac Tabulations of Yardi Matrix data

Current Development Pipeline

Snapshot of the Mixed-Income Development Pipeline

As of October 2020, there are 2,108 mixed-income properties that are either prospective, planned or currently under construction around the country. Projects that are under construction will almost always be completed, given the tremendous resources already allocated to a project that has come out of the ground. Projects in the planned phase are less likely to reach completion than those under construction, since typically several hurdles are yet to be crossed before building can commence. Prospective projects are typically many years away from completion and may not have zoning or other necessary approvals in place. These projects are the least likely to be delivered to the market.

The 2,108 properties in the pipeline include 763 mixed-income properties currently in the development pipeline in ACPs, that will support 188,588 units. There are 305 prospective properties (82,715 units), 250 planned properties (62,238 units) and 208 properties under construction (43,635 units).[6] Exhibit 10 shows a current snapshot of the nation's development pipeline, as well as demographic statistics to show relative size of the market.

Exhibit 10: Snapshot of the Current Mixed-Income Development Pipeline by Geography

	ACPs				**Nation**			
Exhibit 10a	*Prospective*	*Planned*	*Under Construction*	*Total*	*Prospective*	*Planned*	*Under Construction*	*Total*
Properties	305	250	208	763	866	651	591	2,108
% of Total	*40.0%*	*32.8%*	*27.3%*	*100%*	*41.1%*	*30.9%*	*28.0%*	*100%*
% ACP	*35.2%*	*38.4%*	*35.2%*	*36.2%*				
Units	82,715	62,238	43,635	188,588	241,540	173,458	129,020	544,018
% of Total	*43.9%*	*33.0%*	*23.1%*	*100%*	*44.4%*	*31.9%*	*23.7%*	*100%*
% ACP	*34.2%*	*35.9%*	*33.8%*	*34.7%*				
Exhibit 10b	*Existing MF Units*				*Existing MF Units*			
	Census Estimate	*Yardi Estimate*	*Number of Tracts*	*Population*	*Census Estimate*	*Yardi Estimate*	*Number of Tracts*	*Population*
Count	*5,988,142*	*4,184,904*	*15,280*	*61,251,335*	*18,861,418*	*14,329,076*	*73,082*	*326,289,971*
Pipeline as % of Total	*3.1%*				*2.9%*			
% of Nation	*31.9%*	*29.0%*	*20.9%*	*18.8%*	*100%*	*100%*	*100%*	*100%*

Sources: Freddie Mac Tabulations of Yardi Matrix data, 2018 5-Year American Community Survey (ACS). Note: Yardi Matrix's estimate of total units is lower than the estimate from ACS since ACS, in theory, captures the entire market whereas Yardi Matrix does not.

The development activity in ACPs represents about 36.2% of the entire nation's mixed-income pipeline by properties and 34.7% by units. As seen in the top half of Exhibit 10, there is not significant variation among the three pipeline categories when comparing ACPs against the nation.

Exhibit 10b shows multifamily households, population and tracts in ACPs and in the nation. The last row of Exhibit 10b shows how prevalent each of these metrics is within ACPs, which allows for us to see how the current ACP pipeline compares with existing demographics. We find that there is an overrepresentation of multifamily units in ACPs, as shown by the percentage of multifamily units in ACPs (29.2%) exceeding the percentage of tracts (20.9%) and people (18.8%) in ACPs. This implies a higher renter rate, which is an intuitive result given the relatively high concentration of ACPs in densely populated areas where renting is a more common housing option.

[6] For more information on the definition of prospective, planned and under construction, please see this link.

Another interesting observation is that by all three of these measures, development activity in ACPs is comparatively high. For example, according to Yardi Matrix data, roughly 29.2% of existing multifamily units are in ACPs, whereas 34.7% of upcoming units are in these areas. Of course, this compares mixed-income units against all unit types, so it's not a truly fair comparison, but a similar trend is found when pipeline mixed-income units are compared against current mixed-income units (34.7% versus 30.1%).

The increased recent development in ACPs is likely explained, at least in part, by increased development in Opportunity Zones, which tend to be concentrated in ACPs. Opportunity Zones are distinct geographic areas that are characterized by high poverty and subpar employment opportunities. They were created as part of the Tax Cuts and Jobs Act passed in December 2017.[7]

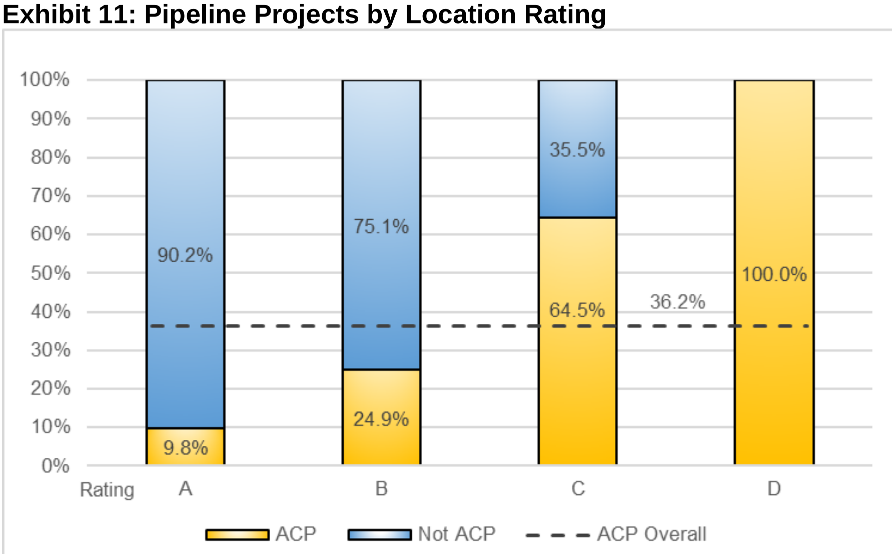
Of the roughly 8,750 Opportunity Zones in the country, 62.6% of them are also an ACP – much higher than the 20.9% assuming independence.[8] Although ACPs were not often specifically targeted for development by investors, the designation of Opportunity Zones has likely spurred development activity in these areas. We estimate that 38.2% of existing mixed-income units that are in ACPs are also in Opportunity Zones, while the rate for the pipeline is 52.4%.

Location Rating

Because ACPs, by definition, are in areas of high poverty, and since high poverty is correlated with higher crime and less employment opportunity, mixed-income pipeline ACP properties tend to score lower on Yardi Matrix's location rating. Indeed, pipeline data from Yardi Matrix shows that upcoming multifamily properties in ACPs are generally in lower rated locations than their non-ACP counterparts.

Exhibit 11 shows the clear divide of location rating based on ACP designation properties. The "ACP Average" line shows the overall proportion of pipeline units that are in ACPs, and as such, exactly matches the 36.2% rate detailed in Exhibit 10. Of all properties with a location rating of A, only 9.8% are located in ACPs, and only 24.9% of projects in B-rated locations are in ACPs. For pipeline projects with a C location rating, 64.5% of them are located in ACPs – substantially higher than the average of 36.2%. All six pipeline units with a location rating of D are located in ACPs.

Exhibit 11: Pipeline Projects by Location Rating



Source: Freddie Mac Tabulations of Yardi Matrix data

[7] https://www.irs.gov/credits-deductions/opportunity-zones-frequently-asked-questions#general
[8] Opportunity Zones are generally high poverty areas, so the high correlation with ACPs is not a coincidence.

We find that mixed-income ACP properties with a better location score tend to have a lower percentage of affordable units. For example, C-rated location properties have 30.3% of units set aside as affordable, while the A-rated location properties have only 26.4% of units.
We also find that mixed-income housing is more common in areas with higher location ratings, which is the same trend that we found when examining the existing mixed-income market. Exhibit 12 shows the rate of mixed-income housing in ACPs and outside of ACPs for each location rating. In all cases, the rate in ACPs is greater. However, disparity in the overall rate is relatively narrow, reflecting the higher concentration of mixed-income properties in areas with a lower location rating.

Exhibit 12: Rate of Mixed-Income Housing by Geography

	Rate of Mixed-Income Housing		
	ACPs	**Non-ACPs**	**Total**
Class A	20.4%	12.9%	13.4%
Class B	13.2%	9.8%	10.5%
Class C	12.3%	10.2%	11.5%
Class D	20.0%	6.7%	20.0%
Total	12.9%	10.4%	11.2%

Source: Freddie Mac Tabulations of Yardi Matrix data

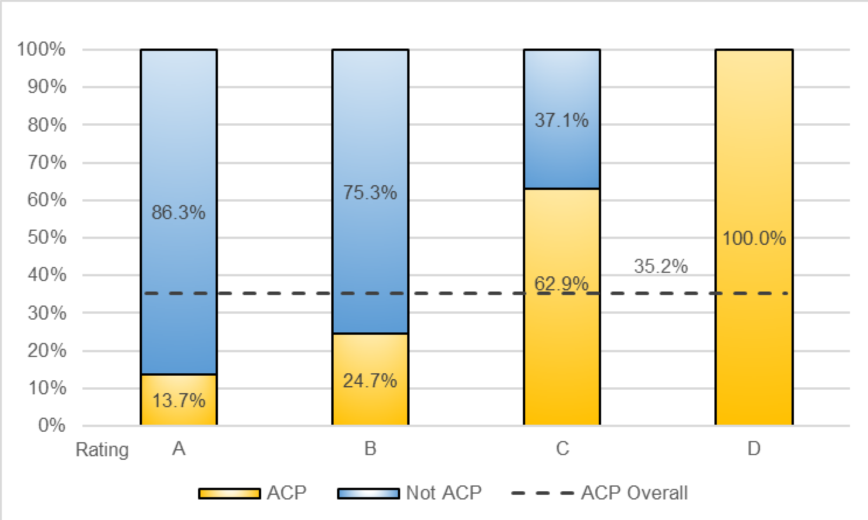
From Exhibit 12, we can see that 11.2% of properties in the pipeline across the country are mixed-income, which compares with only 5.8% in Exhibit 5, which was the same analysis for all completed properties. The disparity is even higher for ACPs – 12.9% vs. 5.9%.

The mixed-income property pipeline database only includes a location rating; since the projects are not yet completed, an improvement rating is not possible.

Location Rating – Projects Under Construction

The pipeline data outlined above includes projects in all stages of development, including those with just preliminary plans (that is, the designations of prospective and planned). These preliminary developments may begin construction soon, but also may be years away from turning dirt, if it even happens at all. To gain a clearer picture of what will actually be delivered within a few years, we examined the location rating of the projects that are currently under construction. In comparison with the overall pipeline, a slightly higher percentage of projects under construction in ACPs are located in A-rated locations, while slightly less are in C-rated locations. However, the distribution is not materially different than when considering all pipeline properties.

Exhibit 13: Under Construction Projects by Location Rating

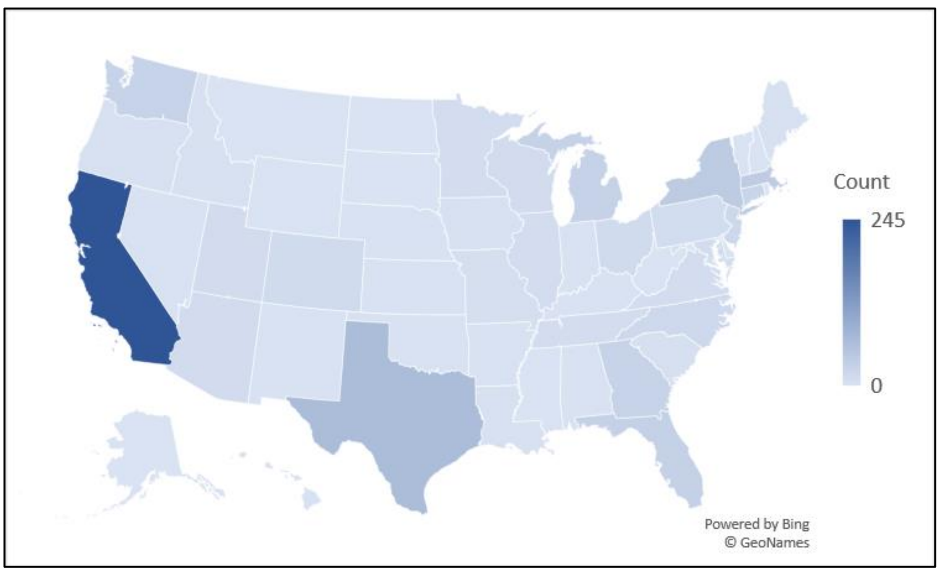


Source: Freddie Mac Tabulations of Yardi Matrix data

Geographic Analysis

California has, by far, the most mixed-income projects in the pipeline in ACPs with 245 new developments and 55,488 units, at least 9,616 of which are affordable. This is nearly four times the number of Texas, which has the second highest number of pipeline projects in ACPs at 66. New York, Massachusetts and Florida round out the top five states with the most affordable pipeline projects located in ACPs.

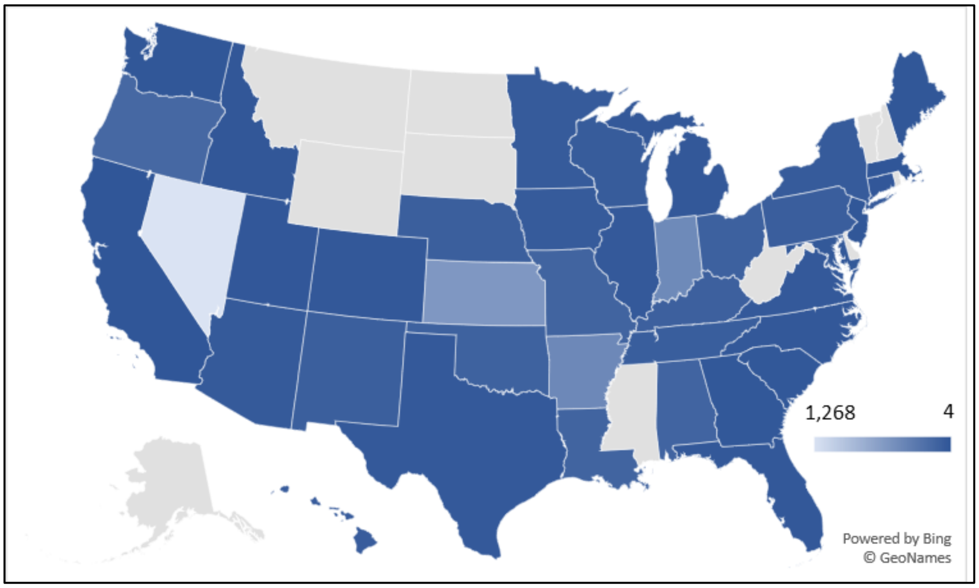
Exhibit 14: Pipeline Mixed-Income Projects in ACPs



Source: Freddie Mac Tabulations of Yardi Matrix data

To further understand the pipeline in ACPs, we compared them with the number of multifamily households per state. D.C. has the fewest multifamily households per pipeline unit in an ACP at just 4. Massachusetts, California, New Jersey, and Washington also have high rates of affordable units in ACPs. The lowest rate is found in Nevada, where only one mixed-income unit in an ACP exists per 1,268 households. Eleven states either do not have any affordable units in ACPs or the number of units was unavailable.

Exhibit 15: Pipeline Mixed-Income Units in ACPs Per Multifamily Household



Source: Freddie Mac Tabulations of Yardi Matrix data

Mixed-Income Development Using Tax Credits

The Low-Income Housing Tax Credit (LIHTC) program has historically been a major source of mixed-income properties in the market. LIHTC properties often set aside all units to be affordable, however, we estimate that about 16% of LIHTC properties delivered to the market each year are mixed-income. In ACPs specifically, the rate is only about 7%.

Developing mixed-income LIHTC properties is often tougher than developing fully affordable LIHTC properties, especially for developers who use 9% tax credits. This type of tax credit is highly competitive; to increase the chances of a successful bid, developers often need to designate all units as affordable at 60% of AMI, even though the LITHC program only stipulates that 40% of units need to be affordable. This results in fewer tax credits properties that are mixed-income.

Additionally, if all units in a property are affordable, then vacancy is typically less of an issue. Indeed, LIHTC properties routinely have lower vacancy rates than purely market-rate properties. If some units are market rate in a LIHTC property, then investors are exposed to (1) more vacancy risk, and (2) less stable rent levels since rents may need to be lower based on local economic conditions. These two risks may partially explain why mixed-incomed LIHTC is relatively rare in ACPs. That is, ACPs are less economically stable which could increase financial risk associated with market-rate units.

Because of these risks and consideration, mixed-income LIHTC development is tough, but still does occur at a meaningful rate.

Pipeline and Current Market in ACPs – Comparison and Demographic Characteristics

Mixed-income in ACPs – Pipeline vs. Current Market

ACPs will receive an outsized portion of mixed-income properties in the near future, according to the pipeline data from Yardi Matrix. Currently, about 32.9% of mixed-income properties are located in ACPs. According to the pipeline data, about 36.2% of properties that are either prospective, planned or under construction are in ACPs. As mentioned earlier, we believe the designation of Opportunity Zones played a role in the increased development activity.

Exhibit 16 shows the breakout of properties by geography. In areas outside of Opportunity Zones, 24.2% of the current mixed-income properties are in ACPs, while 23.4% of pipeline mixed-income properties are in ACPs. Therefore, the incoming properties are marginally less likely to be in ACPs if they are outside of an Opportunity Zone. Meanwhile, the corresponding rates for areas in Opportunity Zones are 70.8% and 75.4%, indicating that incoming properties are more likely to be in ACPs if they are in Opportunity Zones. This shows that the designation of Opportunity Zone appears to be the driver behind the high development activity.

Exhibit 16: Pipeline and Existing Stock by Geography

	Properties in OZs	Properties outside of OZs	All Properties
Mixed-Income - Pipeline (ACP)	392	371	763
Mixed-Income - Pipeline (All)	520	1,588	2,108
ACP Composition	75.4%	23.4%	36.2%
Mixed-Income - Existing (ACP)	596	881	1,477
Mixed-Income - Existing (All)	842	3,648	4,490
ACP Composition	70.8%	24.2%	32.9%
Completed Units (ACP)	11,028	19,473	30,501
Completed Units (All)	14,932	79,719	94,651
ACP Composition	73.9%	24.4%	32.2%

Source: Freddie Mac Tabulations of Yardi Matrix data. OZ stands for Opportunity Zone.

Demographics

Within ACPs, mixed-income properties tend to be in areas where the renter rate, income and income inequality are comparatively high. These trends are true for the existing stock as well as for properties in the pipeline.

Exhibit 17: Demographic Estimates by Mixed-Income Presence within ACPs

	Completed		Pipeline	
	Tracts **without** Mixed-Income Properties	Tracts **with** Mixed-Income Properties	Tracts **without** Mixed-Income Properties	Tracts **with** Mixed-Income Properties
Renter Rate	57.4%	73.4%	57.9%	76.6%
Median Income	$35,609	$36,767	$35,568	$39,091
Median Income – Owner	$55,817	$72,211	$56,181	$79,575
Median Income – Renter	$26,021	$28,454	$26,030	$30,639
Gini Coefficient	0.5209	0.5453	0.5214	0.5560

Sources: Freddie Mac Tabulations of Yardi Matrix data, 2018 5-Year American Community Survey

Demographics - Renter Rate

If an ACP tract has mixed-income multifamily properties, it is much more likely to have a high renter rate. This result is not surprising since the presence of at least one mixed-income property, which averages 178 units, necessarily indicates that the area has rental housing. In ACPs with existing mixed-income properties, 73.4% of households are renters, whereas only 57.4% of households rent in ACPs without mixed-income. For ACP tracts that have mixed-income properties in the pipeline, the story is largely the same: 76.6% of households rent compared with 57.9% in tracts that do not have mixed-income properties in the pipeline.

Most ACP tracts that have mixed-income properties in the pipeline do not already have existing mixed-income properties. Indeed, only 32.9% of ACP tracts with mixed-income units come already have mixed-income units. Of course, the decision by developers about where to place new units is not arbitrary. For example, areas with a high population density will more easily attract multifamily rental housing, and these two attributes are highly correlated. Therefore, it is not surprising that mixed-income properties are going to be developed in areas that already have a high renter rate.

We estimate that, of the 362 tracts that have mixed-income units in the pipeline but no mixed-income units currently, the renter rate is still very high at 75.6%. In ACP tracts with *both* existing and pipeline mixed-income properties, the rate is higher at 82.4%.

Demographics – Income

We observe that, within ACPs, income is higher in tracts where there are mixed-income properties. Specifically, we estimate that the median income in ACPs with mixed-income properties is $36,767 compared with $35,609 in ACPs without mixed-income – a difference of 3.3%. The disparity is much larger for both owner and renter households; the corresponding rates for owner households is $72,211 and $55,817 (29.4% difference), and the corresponding rates for renter households is $28,454 and $26,021 (9.4% difference).

The larger differences observed for renters and owners can be explained by the renter rate in areas with mixed-income properties. Renters generally have lower income than owners, so a high concentration of renters can bring the average down. Thus, tracts with mixed-income properties have higher household income generally, but comparatively more households with lower income, so the net effect is a comparatively small difference.
For units in the pipeline, the disparity of income between tracts with and without mixed-income properties is even greater. We find that the median household income for tracts with upcoming mixed-income properties is 9.9% greater than tracts without (compared with 3.3% in the completed property analysis). This high disparity exists for owner income (41.6%) and renter income (17.7%) as well.

We believe that this increased disparity of incomes is reflective of the demographics of areas that can support the arrival of newer, higher priced units. That is, if an area is receiving newly constructed units, then it must have an income level that is high enough to support the rents of these units, which can generally command a higher rent level than older units, especially for the market-rate units.

Demographics – Income Inequality

For insight on income inequality, we can compare the Gini coefficient of ACPs with development activity against ACPs without development activity. The Gini coefficient examines how the cumulative share of income compares with the cumulative share of population. A Gini coefficient of zero implies complete income equality (everyone has the exact same income), whereas a value of one implies complete income inequality (one person has all the income).

We estimate that in ACPs, the average Gini coefficient in tracts that have mixed-income properties is 0.5453, which compares with 0.5209 for tracts without mixed-income. These results imply that income inequality is likely higher in ACP tracts that have mixed-income properties. We have shown in our previous research that income inequality (as measured by Gini) is generally higher in ACPs relative to other areas. This new finding shows that, within ACPs, higher levels of income inequality exist where there are mixed-income units.

This result is intuitive and is consistent with our previous research. In our 2018 Duty to Serve paper titled Mixed-Income Housing in Areas of Concentrated Poverty, we found that census tracts with residents at various income levels may be better able to support mixed-income development, since this type of housing requires occupancy by both higher and lower earners. The disparity in Gini coefficients, which is evident in pipeline data as well with corresponding rates of 0.5560 (ACP tracts with mixed-income) and

0.5214 (ACP tracts without mixed-income), suggests that the positive relationship between income inequality and mixed-income prevalence is likely true.

Affordable Composition of Mixed-Income properties

Overall, 43.3% of completed units within mixed-income properties in ACPs are affordable — a rate much higher than those yet to be delivered. For pipeline units, only 26.3% of units within these mixed-income properties are considered affordable in ACPs.

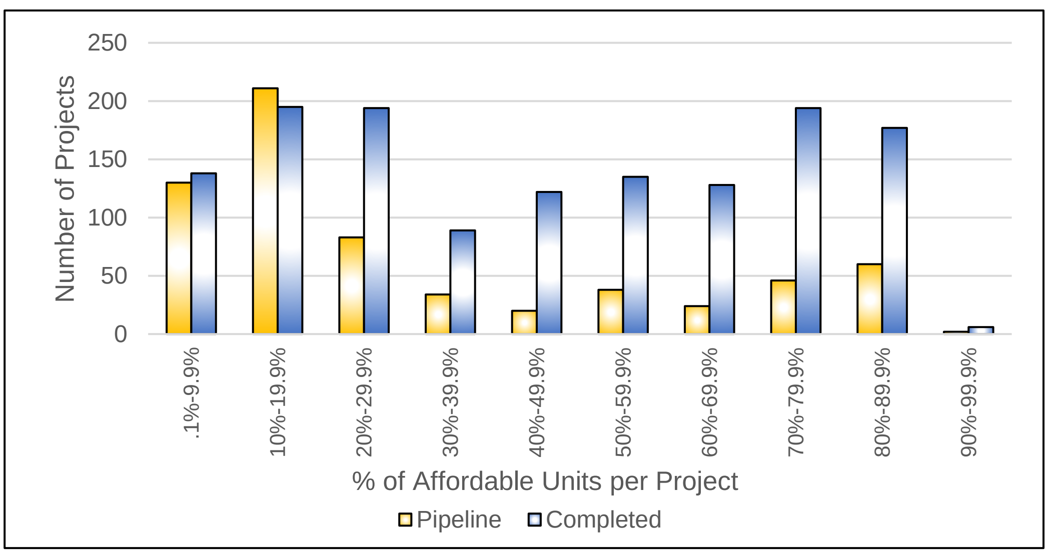
Exhibit 18: Affordable Units Compared with All Units in ACPs

	Pipeline			Complete		
Location Rating	All Units	Affordable Units	% Affordable	All Units	Affordable Units	% Affordable
A	9,722	2,567	*26.4%*	13,995	3,783	*27.0%*
B	*65,669*	*13,541*	*20.6%*	*87,033*	*30,303*	*34.8%*
C	*86,792*	*26,277*	*30.3%*	*148,238*	*73,579*	*49.6%*
D	572	373	65.2%	3,044	1,596	52.4%
Total	*162,755*	*42,758*	*26.3%*	*252,310*	*109,261*	*43.3%*

Source: Freddie Mac Tabulations of Yardi Matrix data

Pipeline projects having a lower percentage of affordable units can be attributable to several factors. As shown in Exhibit 19, more than half of all pipeline properties within ACPs have less than 20% of total unit count affordable. Some of the completed projects may have been developed with affordable programs that are no longer as well funded as they were previously, leading to fewer affordable units in the pipeline. Additionally, municipalities across the country are incentivizing developers to include affordable units in projects that would otherwise be fully market rate. These are relatively new programs, and typically require that only a small percentage of units be made affordable.

Exhibit 19: Percentage of Affordable Units in Mixed-Income Properties in ACPs



Source: Freddie Mac Tabulations of Yardi Matrix data

With that said, over the coming years, as these developments are completed, we will be able to further understand how many of these affordable units are delivered, and if the trend of less affordable units within these mixed-income communities continues.

Conclusion

The development of any affordable housing is a difficult but vital endeavor. While mixed-income housing is not a new idea, it appears to be poised for great expansion in the future. There are over 760 mixed-income properties, with almost 190,000 units total currently in the pipeline, of which nearly 43,000 are affordable. These properties can be found in almost all states, with the most pipeline developments found in California, Texas and New York. As we learned in our 2018 research paper these units provide a way to deconcentrate poverty and lift the economic and social conditions for those in the area. These properties provide not just a home for lower- and higher-income residents, but they also provide a stronger tax base for local governments. This allows them to improve schools in the neighborhood, providing the younger generations with economic mobility. Over time, these mixed-income developments have the potential to improve not only the lives of the residents of these multifamily developments, but those who live in the neighborhood with them.

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